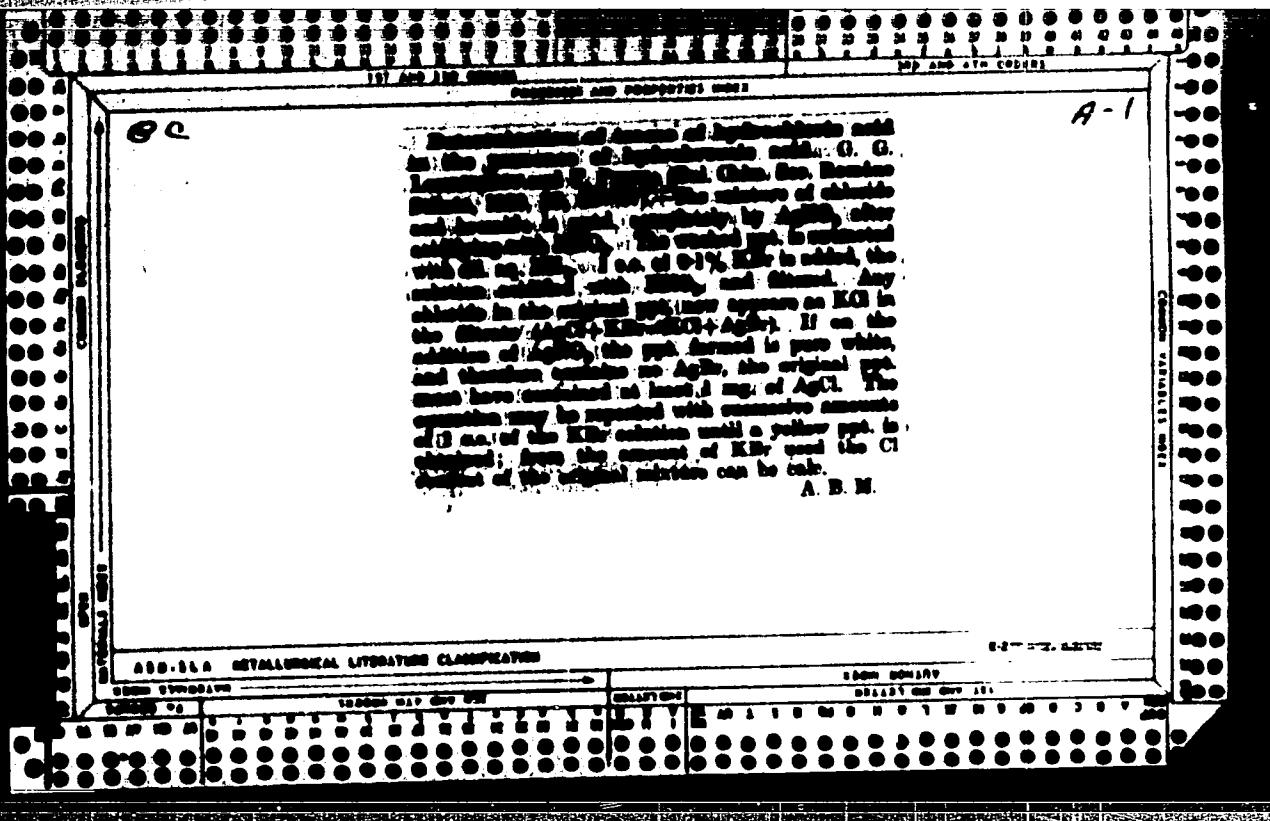


1A

A new, rapid and precise method for the quantitative separation of copper from bismuth or from bismuth, anti-mony, and tin. O. Neacsu and Despina Petrea (Univ Bucharest, Romania). Acad Rep Populara Romane Bul Stiint, Rev Mat., Fiz., Chim 2, 611 (1960) (French summary).—To the soln. contg Cu and Bi imm add 0.75 g tartaric acid for each 0.1-0.3 g. Bi. Dil to 70-80 ml add 2.0-3 ml pyridine and 0.5 g. solid NH<sub>4</sub>SCN gradually while stirring. A green ppt. of [CuPy<sub>2</sub>(SCN)<sub>4</sub>] is formed immediately. When the ppt. has settled, filter through a filter crucible A<sub>1</sub>. Wash the ppt. with a soln. of 0.75 g NH<sub>4</sub>SCN + 0.75 g. tartaric acid + 2.5 ml pyridine + 2.5 ml H<sub>2</sub>O and then 7-8 times with 2.5 ml of a soln. contg 0.13 g. NH<sub>4</sub>SCN + 2 ml. pyridine + 45 ml. H<sub>2</sub>O in 250 ml 90% EtOH. Finally wash with abv. EtOH and H<sub>2</sub>O contg a small amt. of pyridine and dry for 20 min. *in vacuo* at room temp. If Bi, Sn, and Fe are present in the Cu alloy or mineral, treat with hot concd. HCl, introduce a few ml H<sub>2</sub>O<sub>2</sub> dropwise, heat until all metals are dissolved and the excess H<sub>2</sub>O<sub>2</sub> removed. Add 0.75 g. tartaric acid, dilute to 75 ml., and add 5 ml. pyridine and 0.5 g. NH<sub>4</sub>SCN with stirring. Wash as described above.

Gerhard Aufleger



## PHASE I BOOK EXPLOITATION

375

Katsnel'son, Genrikh Mayorovich; Saf'yan, Matvey Matveyevich;  
Chekmarev, Aleksandr Petrovich; Maly'y, Georgiy Ivanovich

Prokatka tolstykh listov s povyshennoy tochnost'yu (Rolling of  
Steel Plate to Close Limits) Moscow, Metallurgizdat, 1957.  
125 p. 4,000 copies printed.

Ed. (title page): Chekmarev, A. P., Active Member, Ukrainian  
Academy of Sciences, Doctor, Professor; Ed. (inside book):  
Pirskiy, F. N.; Ed. of Publishing House: Valov, N. A.;  
Tech. Ed.: Karasev, A. I.

**PURPOSE:** This book is intended for engineers and technicians in  
rolling mills. It can also serve as a manual for  
researchers and students of vuzes.

**COVERAGE:** The book deals with the hot rolling of steel plate to  
close limits on a three-high Lauth mill. Various factors  
affecting the precision of rolled plate are discussed.  
The rolling of plate is subject to variables such as:  
temperature of metal, mill spring, roll design, and other  
characteristics inherent in the material and equipment.

Card 1/3

Rolling of Steel Plate to Close Limits

375

The author investigates each of these problems and advances various solutions. There are numerous diagrams and formulae. 6 Soviet references.

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(A) L 65136-65 EWT(d)

UR/0286/65/000/013/0112/0112

ACCESSION NR: AP5021631

AUTHORS: Vasilenko, N. T.<sup>yy</sup>; Vasil'yev, Yu. P.<sup>yy</sup>; Orlov, Yu. V.<sup>yy</sup>; Pirsiky, P. K.<sup>yy</sup>

TITLE: A hinge for connecting pontoons. Class 65, No. 172643

16

B

SOURCE: Byulleten' izobreteniij i tovarnykh znakov, no. 13, 1965, 112.

TOPIC TAGS: pontoon, mechanical fastener

17

ABSTRACT: This Author Certificate presents a hinge for connecting pontoons, made in the form of two brackets fixed to the flanges of adjacent pontoons and joined by an axle (see Fig. 1 on the Enclosure). To facilitate and expedite joining pontoons for floating in waves, the axle of the hinge is fixed on two radially-spherical bearings pressed into the bracket. In its central portion, the cross section of the axle is square. This square portion enters into a slot of the other bracket which also has a slot perpendicular to the first one. The second slot forms a seat for a wedge which locks the hinge when the pontoons are connected.

Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 31Mar64

ENCL: 01

SUB CODE: IE

NO REP SOV: 000

OTHER: 000

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L 65136-65

ACCESSION NR: AF5021631

ENCLOSURE: 01

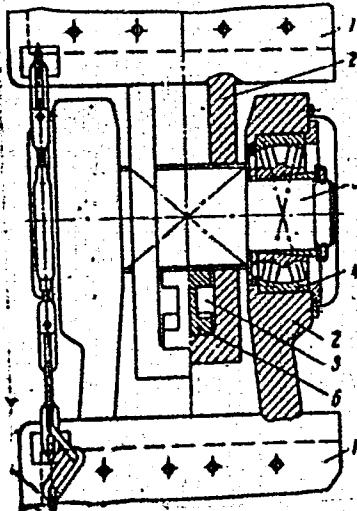


Fig. 1. 1- pontoons; 2- brackets; 3- hinge  
axis; 4- radially-spherical bearings; 5- slot;  
6- wedge

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Card 2/2

PIRSITEL, Jerzy, inz.

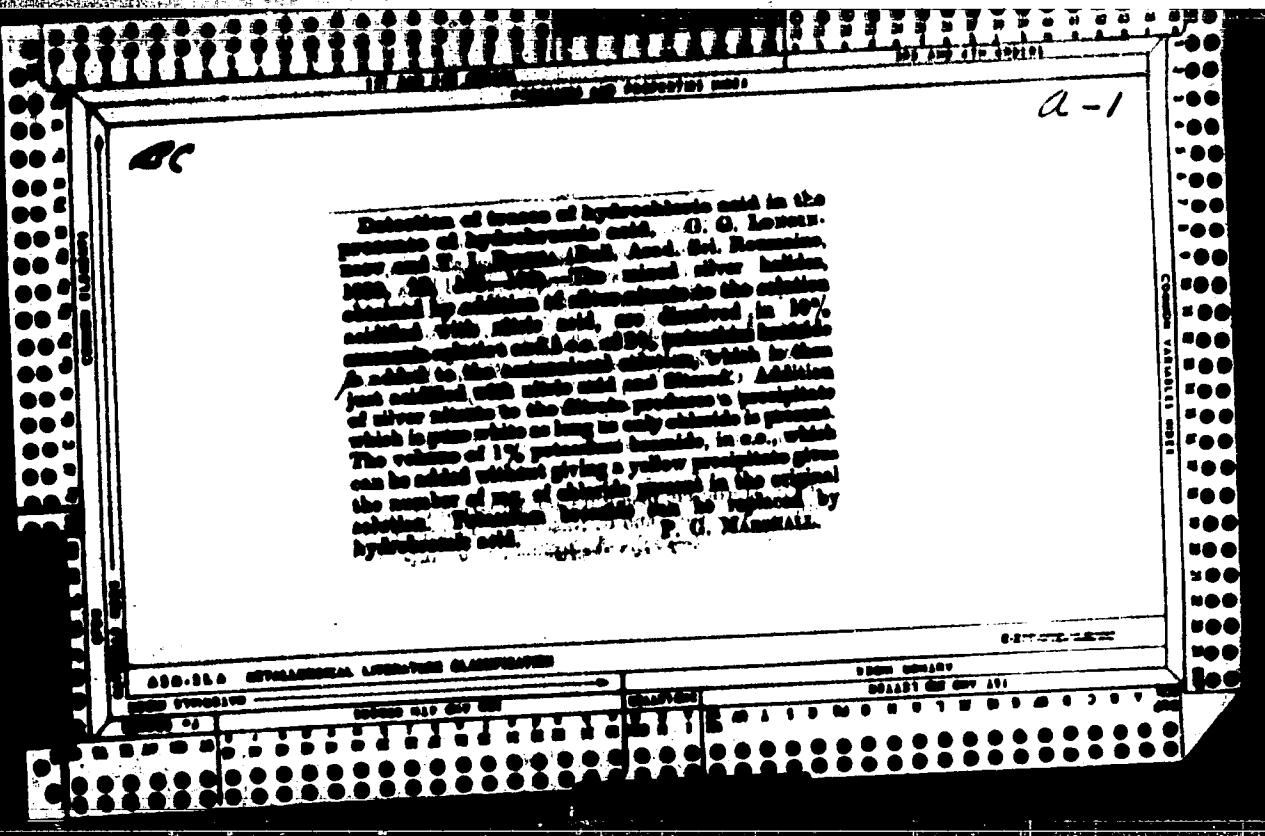
Behavior of voltage transformers in 11 kv networks with insulated neutral point. Energetyka Pol 1<sup>st</sup> no. :209-411 JI '63.

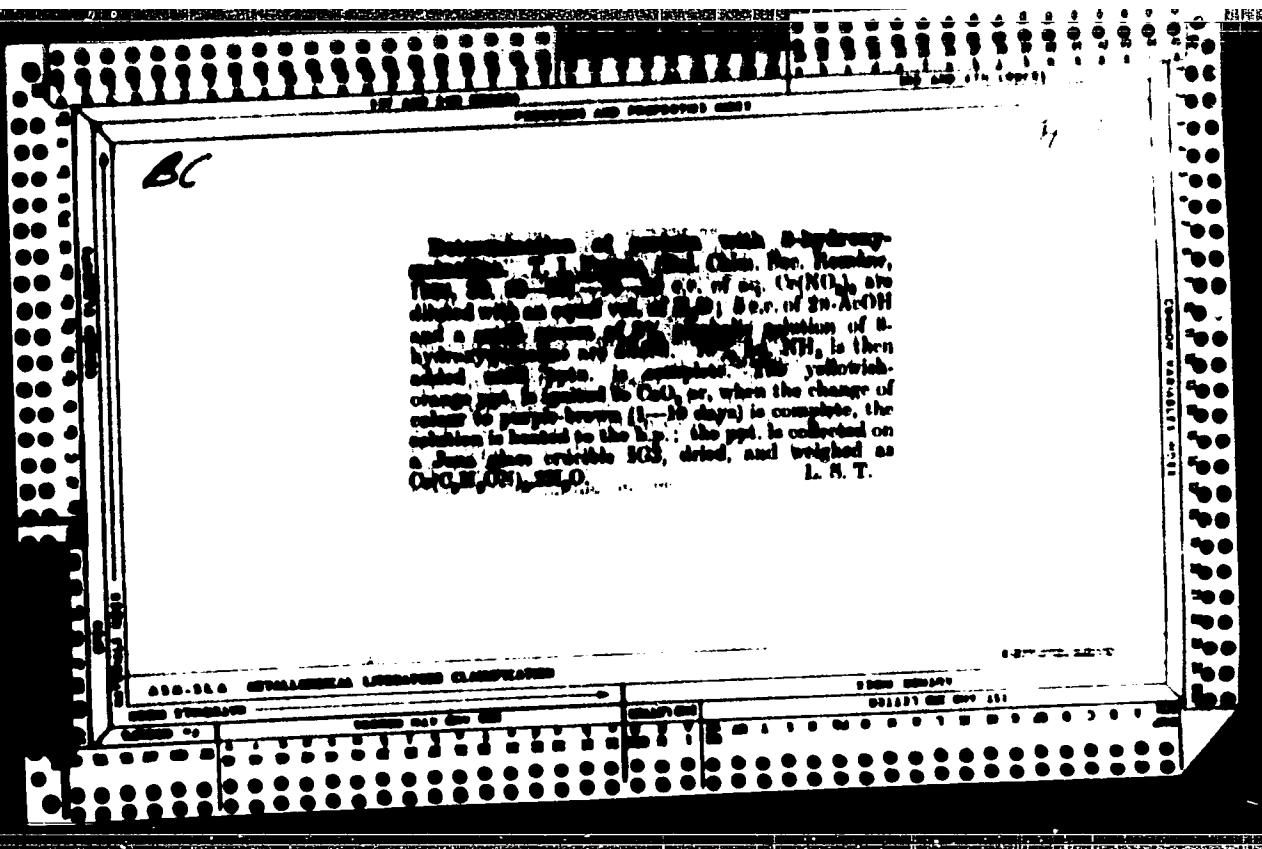
1. Zaklad Energetyczny, Gdansk.

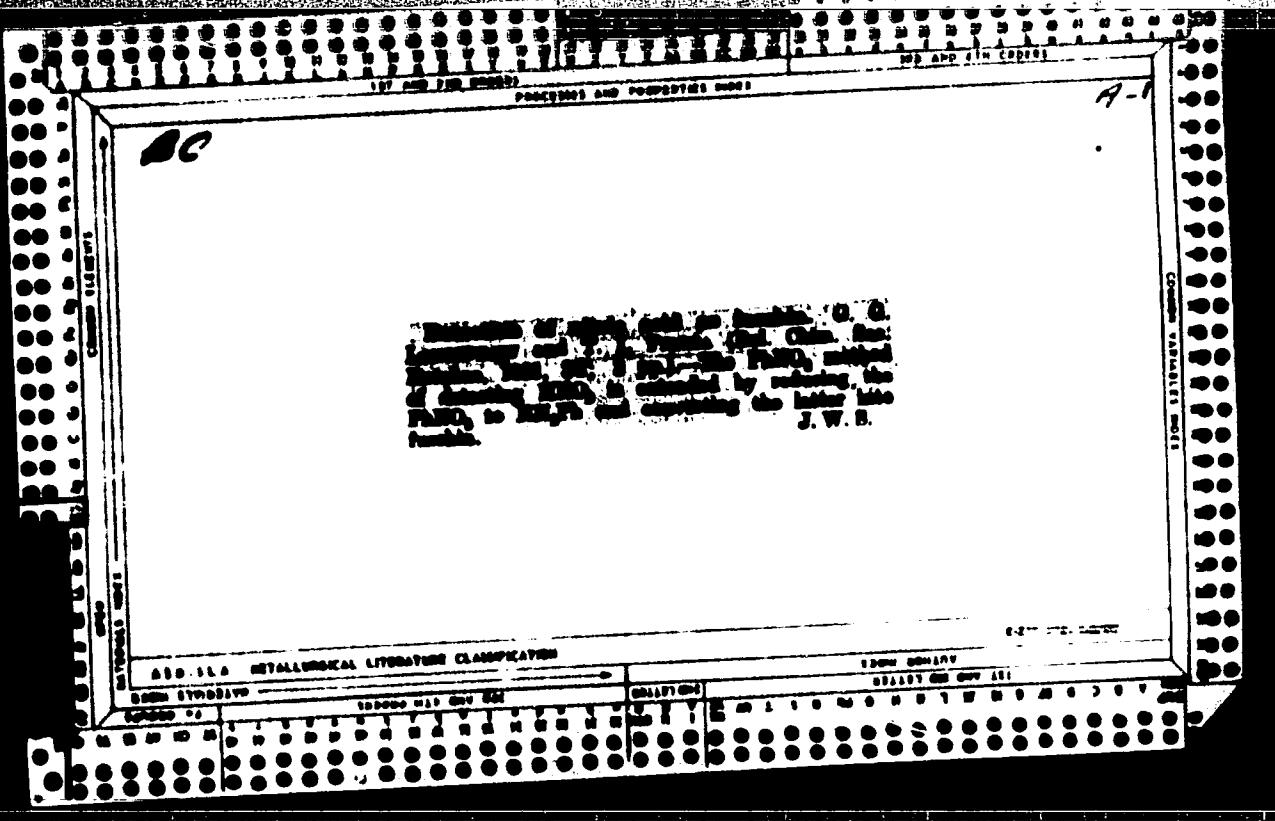
IMIELINSKI, Jan, mgr inz.; PIKOTTEL, Jerzy, inz.; KUSOWSKI,  
Kazimierz

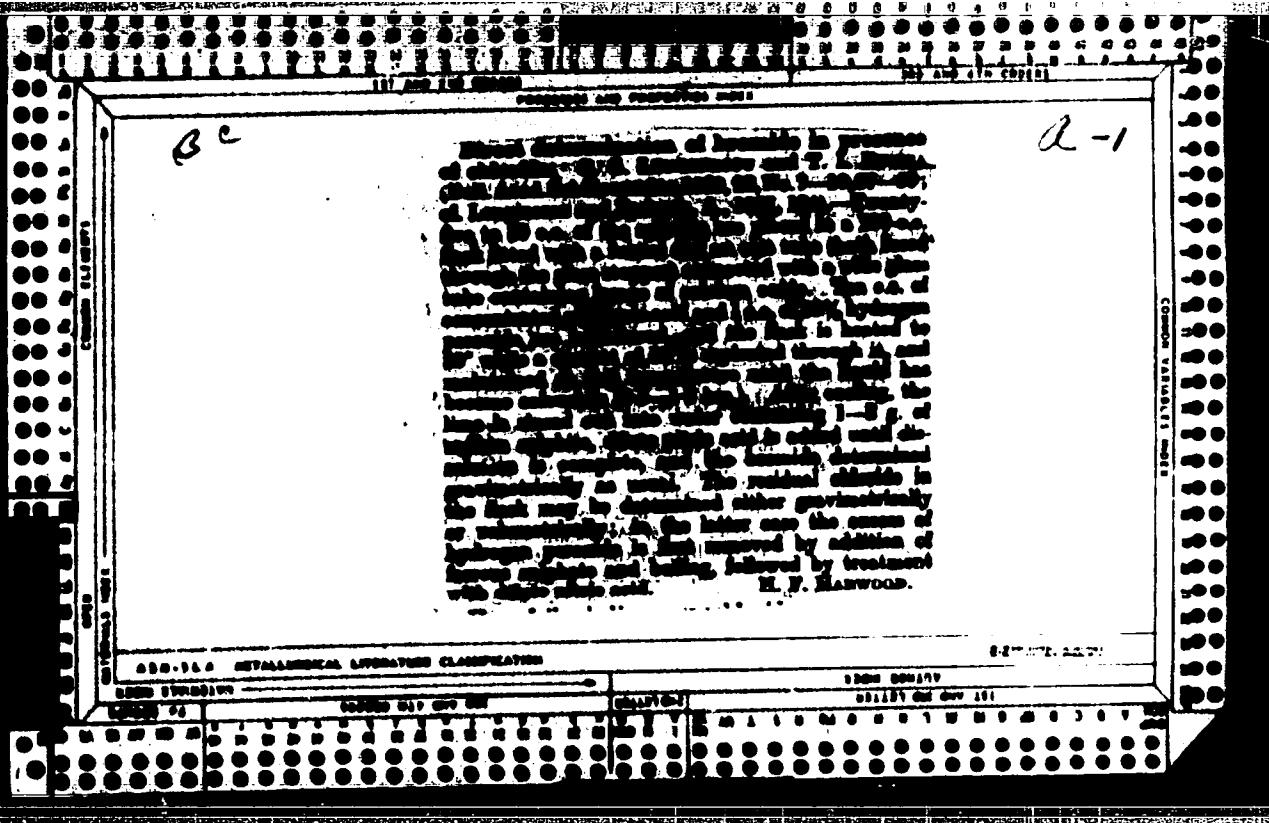
Methods of decreasing the number of possible 15 kv cable  
faults. Energetyka Pol 18 no. 2: 44-45-48 F '64.

1. Zaklad Energetyczny, Gdansk.









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*ca*

7

Determination of cerium with 8-hydroxyquinoline Th  
I. Putea Bul. Chem. Soc. Romane Chim. 30, 83-6  
(1937-8) (in German). To 20-40 ml. of a neutral soln  
contg up to 0.10 g. of  $Ce^{+3}$ , add 3 ml. of 2 N AcOH  
and a slight excess of a 3% soln of oxine in EtOH. No  
ppt will form. Now add from a pipet 10%  $NH_4$  until  
the Ce is pptd. The ppt has a yellow-orange  
color which slowly becomes brownish purple. This latter  
compd. has the more definite constitution. After the  
change in color is complete, heat to boiling, filter through  
a glass filtering crucible, wash with hot water, dry and  
weigh. The ppt has the formula  $Ce(C_6H_4ON)_2$ .  
Obviously an oxidation of the  $Ce^{+3}$  has taken place.  
The ppt contains only 18.3% Ce. The results obtained  
in 14 expts. in which the ppt. was weighed were excellent,  
but it takes so long to complete the transformation to  
ceric salt that it is more practicable to ignite the ppt. and  
weigh the residual  $Ce_2O_3$ . Good results were obtained in  
10 analyses. W. T. H.

**Detection of nitric acid by the formation of fuchsin.** G. G. Longmire and Th. J. Pirka. *Biol. chim. agric.* Chem. Abstr., Nov. 19, 1940, 3 pp. (1941). The test depends upon the formation of  $C_6H_5NO_2$  by treatment with a little benzene and concd.  $H_2SO_4$ , reducing the nitrobenzene to aniline and making the aniline react with  $HgCl_2$  to form fuchsin. To a little of the substance in a test tube add 2-3 drops of benzene and 1 cc. of concd.  $H_2SO_4$ . With the temp. of the mixt. approx. 30° add a little water and introduce powdered Zn little by little. After the  $C_6H_5NO_2$  has been reduced to  $C_6H_5NH_2$ , divide the soln into 2 parts and test one portion for aniline by the reaction with  $Cu(OH)_2$ . To the other portion add a little solid  $HgCl_2$  and evap. just to dryness under the hood. Continue heating carefully until a reddish green coloration appears on the sides of the tube. Cool, add a little  $H_2O_2$  and the presence of fuchsin will be shown by the reddish violet color of the soln.

MA

7

The Quantitative Estimation of Cerium with Ortho-oxquinoline. The J  
Pract. Chem. (Berl.) 1937-1938, 39, 84. S. G. Lederer  
U.S. Pat. 1910, 111, 613. (In German). Dilute 10 ml. of a Ce(IV) solu-  
tion with the same amount of water, neutralize with 1 cc. of 2M NaOH, add  
one drop of 3% alcoholic solution of oxine. Add 10 cc. NH<sub>4</sub>OH  
solution drop by drop until precipitation is complete. Allow the orange  
yellow precipitate to settle and to remain until it has become entirely purple  
brown in colour, then bring to the boil and filter through a glass filter. Wash  
well, dry, and weigh. The dried precipitate has the composition  
 $Ce_2(H_2O)_8(OH)_2(H_2O)$ . The colour change takes place in 1-10 days. A much  
sooner way with the same accuracy is to filter the hot precipitate immediately  
after formation through a quantitative filter, wash with hot water, and ignite  
in U.S.P.

1113

7

A new rapid and precise method for the determination of aluminum. G. Spacu and Th. I. Petrea Univ. Bucharest, Romania. Acad. Rep. Populare Romane, Bul. Stiint., Ser. Mat., Fiz., Chim. 2, 619-25 (1959) (French summary).  
See Mat. Eq. Chim. 2, 619-25 (1959) (French summary).  
Treat a small sample of metallic Al with an excess (2.8 ml.) of a 10% w/v soln. of Na-metarsophthalimidate. Collect NH<sub>4</sub>NO. After stirring, filter through a porcelain filter crucible A or A<sub>2</sub> or Jena crucible KG. Transfer all the ppt. to the crucible with a soln. of 0.1 g. reagent in 100 ml. H<sub>2</sub>O. Wash the ppt. 3-4 times with 2-3 ml. portions of H<sub>2</sub>O and dry at 105-110° for 30-40 min., then weigh. Prepn. of the reagent. Treat metarsophthalimidate with a 1N soln. of NaOH. Use a little less than the stoichiometric amt. of NaOH and remove the excess metarsophthalimidate by filtering. The obtained soln. of CH<sub>3</sub>NH<sub>2</sub>Na has a pH of 8.

Gerhard Aufleger

New method for the gravimetric determination of thorium  
G. Sporea and I. Butescu (Umfac Bucharest - Romania)  
Actas Rep. Populara Romane, Nat. Scienc. Ser. Mat., No.  
Chem. 2, 1980, 76 (1981) French summary To 5.0 ml  
of a soln. contg. 0.02-0.2 g Th(NOs<sub>2</sub>)<sub>4</sub> add 2.0 ml of the  
Na salt of mercaptoethanethioate soln. while stirring.  
A white ppt. is formed instantaneously. After stirring for 5  
min. filter with a filter crucible A or Jena 10%, wash with 50  
ml. of a soln. contg. 1.1 M reagent in 100 ml. H<sub>2</sub>O,  
1.0 ml of a soln. contg. 1.1 M reagent in 100 ml. H<sub>2</sub>O,  
then 4-6 times with 2 ml. H<sub>2</sub>O, dry at 105-110° for 30-45  
min. and weigh as (C<sub>4</sub>H<sub>7</sub>NNa<sub>2</sub>Th). It is important that a  
large excess (4 times) of reagent is used. To prep. the  
reagent see preceding abstract. Gerhard Aufeger

CA

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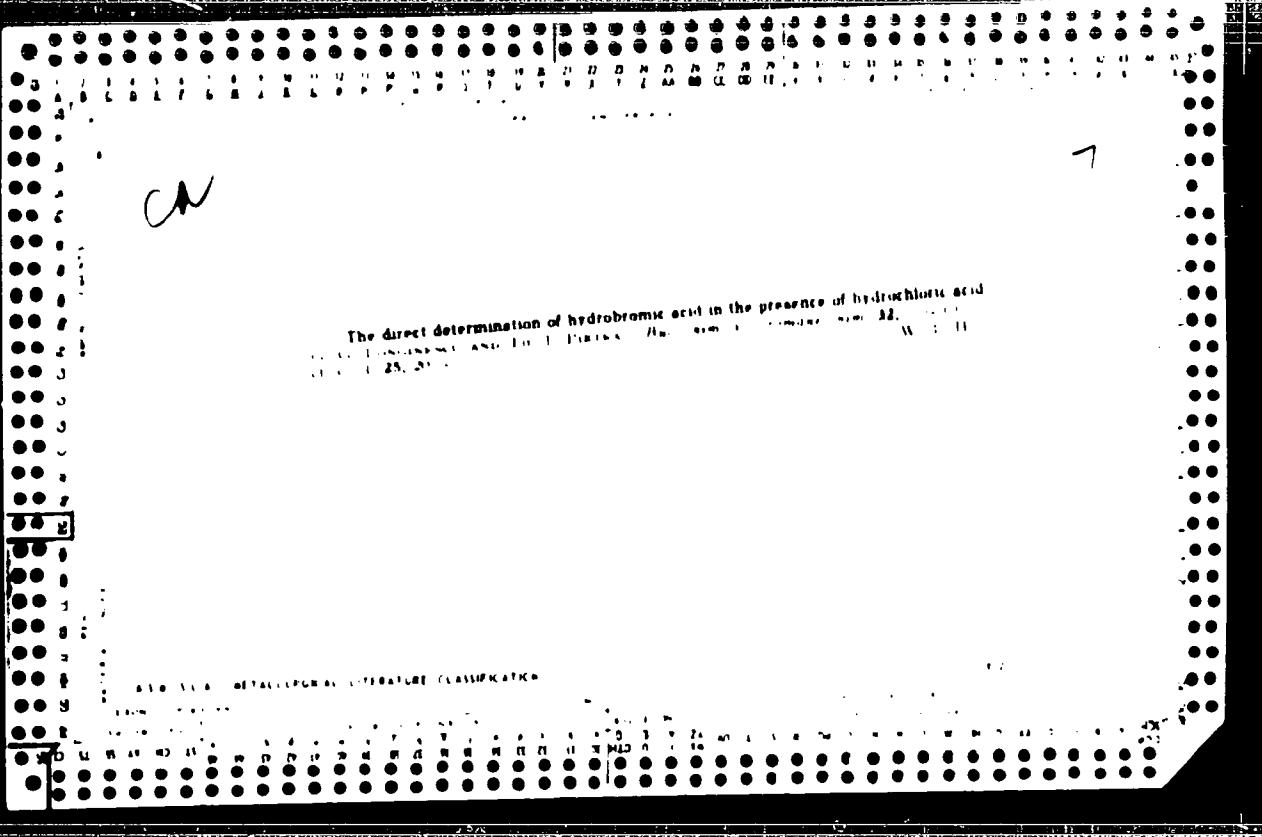
New method for the gravimetric determination of thorium  
G. Spălu and Ph. I. Parasca (Univ. Bucharest, Romania)  
*Acad Rep Populare RSR 1967 Rev Scient Ser. Mat. Fiz.*  
*Chem. 2: 600-70 (1967)* French summary To 5.2 ml  
of a solution contg 0.02-0.2 g Th(N<sub>3</sub>)<sub>4</sub> add 2.10 ml of the  
Na salt of mercaptobenzothiazole soln while stirring.  
A white ppt is formed instantaneously. After stirring for 5  
min filter with a filter crucible A or Jeannette, wash with 50  
100 ml of soln contg 1.15 ml reagent in 10 ml H<sub>2</sub>O  
then 4-6 times with 2 ml H<sub>2</sub>O, dry at 105-110° for 30-45  
min, and weigh as (C<sub>8</sub>H<sub>7</sub>N<sub>3</sub>S<sub>2</sub>Th). It is important that a  
large excess (3-4 times) of reagent is used. To prep. the  
reagent see preceding abstract. — Gerhard Aufleger

*CH*

Determination of hydrochloric acid in the presence of hydrobromic and hydroiodic acids. G. G. LINDNER AND T. J. PIRLA. Anal Chem 22, 1034 (1950). The method described depends upon first pptg with  $\text{AgNO}_3$  in dil.  $\text{HNO}_3$  and weighing the ppt. This gives the wt. of  $\text{AgCl}$  together with  $\text{AgI}$  and  $\text{AgBr}$ . In a second portion of the same soln, the ppt is kept as far as possible in the beaker and washed by decantation to remove all excess  $\text{Ag}^+$ . The ppt is then heated with 30 gr. of 7.6%  $\text{NH}_4\text{SO}_4$  and treated with a min. of  $\text{Kl}$  in  $\text{H}_2\text{O}$ , whereby any chloride of  $\text{Ag}$  is converted into  $\text{AgI}$ . This ppt is also weighed. Finally, when all 3 halides are present, a similar treatment is given to the ppt except that  $\text{Kl}$  is added after the treatment with  $\text{NH}_4\text{SO}_4$ . In this case, the total halide content is determined as  $\text{AgI}$ . The purpose of the  $\text{NH}_4\text{SO}_4$  treatment is to dissolve all the  $\text{AgCl}$  and part of the  $\text{AgBr}$ , whereby the  $\text{Kl}$  or  $\text{Kl}$  solution becomes more effective in accomplishing the desired conversion.

W. H. H.

Sample method for detecting traces of hydrochloric acid in the presence of hydrobromic acid. G. G. LONGINESCU AND TIN. I. PINTEA. *Bull. Inst. de cercare tehnologice din Iasi*, 1953, 6(1953). First ppt all the halogen by adding an excess of  $\text{AgNO}_3$ . Filter off the ppt. and wash it with water till all excess Ag is removed. Then pour a little 0.1*N*  $\text{NH}_4\text{OH}$  through the filter several times, this should dissolve the  $\text{AgCl}$  much more readily than the  $\text{AgBr}$ . To the ammoniacal min add 1 cc. of 0.1%  $\text{KBr}$  with make acid with  $\text{HNO}_3$  and filter. To the filtrate add a little  $\text{AgNO}_3$ , if a white ppt. of  $\text{AgCl}$  is obtained it is certain that the original ppt. contained at least 1 mg. of  $\text{AgCl}$ . W. T. H.



**Direct determination of hydrobromic acid in the presence of hydrochloric acid.** G. G. LOVINSWELL and TIN L. LIU. *Bull. soc. chim.* 12, No. 7, p. 239 (1936). Introduce 200 cc. of the acid wine into a 250 cc. glass-stoppered flask which is provided with a tap funnel leading to the bottom of the flask and with a delivery tube, both entering the flask through the ground glass stopper. The outlet leads to a tube of difficultly fusible glass 0.6-0.7 cm. in diam. and about 15 cm. long filled with calcined lime or magnesia. With the former it is necessary to heat the lime to dull redness. Add to the contents of the flask through the tap funnel, 10 cc. of concentrated  $H_2SO_4$ , and 1 cc. of perhydrol. By means of suction, pass a current of air through the app. Heat the contents of the flask on the water bath to about 80°. The current of air carries along the  $Br_2$  liberated by the oxidation of the  $HBr$  and the escaping  $Br_2$  is retained by the  $CaO$  or  $MgO$ . Continue heating and passing the air until the liquid in the flask is colorless, which takes 0.5-1.5 hrs. Det. the  $Cl^-$  in the flask gravimetrically as  $AgCl$  by  $K_2S_2O_8$  titration after the addition of excess  $Ag^+$ . Empty the absobent into 200 cc. of water and add 1.2 g. of  $Na_2S_2O_3$  to reduce any bromate that may have formed. Wash out the tube with  $HNO_3$ , filter off any impurity and det. the  $Br^-$  as  $AgBr$ . The numerous results given show that the method is accurate and reliable. W. H. T.

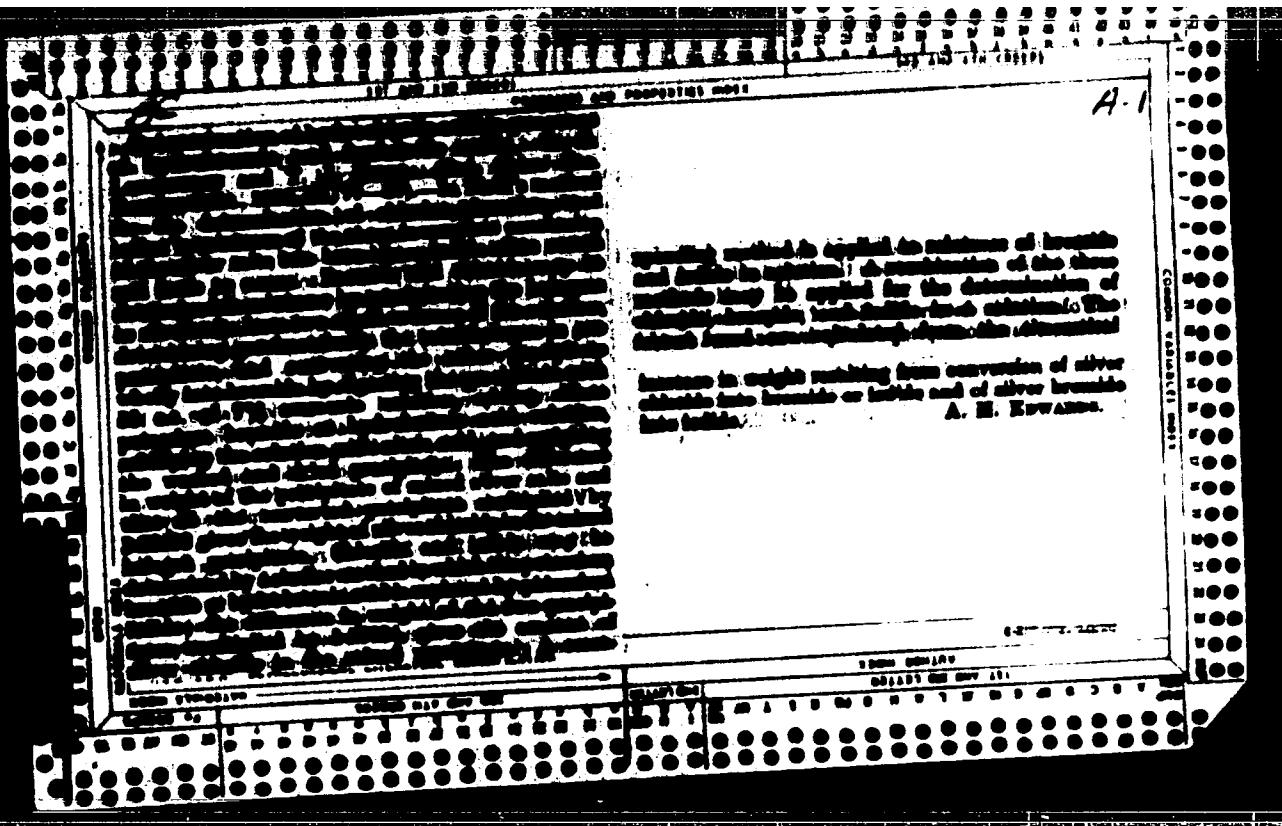
W T H

APPROVED FOR RELEASE: 07/13/2001

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CA

A new rapid and precise method for the determination of aluminum. G. Spica and D. I. Petrescu, J. din Bucharest, Romania, Acad. Rep. Populare Romane, Bucharest, Romania, Ser. Mat., No. 1, chim. J. 1970, 27, 19. French summary:  
Treat a solution containing Al with excess of 2% salt of a 10% soln. of Na mercaptobenzoate. After stirring  
mercapto-benzoate with a salt of 0.1 g. reagent in 100 ml. H<sub>2</sub>O to the crucible with a salt of 0.1 g. reagent in 100 ml. H<sub>2</sub>O. Wash the ppt. 3-4 times with 2-3 ml portions of H<sub>2</sub>O and dry at 100-110° for 30 min., then weigh. Prepn. of the  
reagent. Treat mercaptobenzoate with a 5% soln. of NaOH. Use a little less than the stoichiometric amount of  
NaOH and remove the excess mercaptobenzoate by  
filtering. The obtained salt of CH<sub>3</sub>Na has a pH of 8  
according to Anderer.



1. 2. 3. 4. 5. 6.

Academie Române de științe în Insectofauna, București.

Academie Republicii Populare Române, Calea 13 Septembrie, București,  
Romania. Vol. 1, no. 1, 1952.

Monthly List of East European Acquisitions (EMA - Vol. 1, no. 7, July 1952).

Incl.

PIRTEA, D.

2023. New gravimetric method for the rapid estimation of copper<sup>70</sup>. Pirtea, E., Doratu and S. Zelig. *Anal. Chem. Research*, 1967, 1 (3-4), 235-238. --Copper is pptd. quant. as  $\text{CuPy}_3(\text{ClO}_4)_2$  by the addition of pyridine and solid  $\text{NaClO}_4$  at room temp. After filtration, the ppt. is finally washed with ether and is dried in a vacuum desiccator. The analysis can be performed in <45 min.

J. H. WATSON

fra  
MT

PIRTEA, D.

6

12213. New gravimetric methods for the rapid estimation of the elements nickel, cobalt and cadmium. D. Pirtea, G. Dumitrescu and N.

Melencu. Stud. Cercet. Chim., Bucharest, 1953, 3

(2-3), 237-242.—Nickel, Co and Cd are each pptd.

quant. as the complex  $[M\text{Py}_3]\text{[Cr}_2\text{O}_7]$  by the addition

of pyridine and  $\text{K}_2\text{Cr}_2\text{O}_7$ , son. at room temp. After

filtration, the ppt. are washed with ethanol and

with ether, and are dried in a vacuum desiccator.

Each analysis can be performed in 45 to 50 min.

J. H. WATON

Ch. 11

free  
mt

PITTEA DESPINA.

In the separation and gravimetric determination of copper  
in the presence of iron or aluminum or of both of these  
metals. Ghi. Spatea and Despina Pittea. Comiss. Acad.  
Rep. Populare România 3, 77-82 (1957). The method of S.  
and Dick (C.A. 31, 2643), consisting in the pptn of Cu as  
a pyridine complex [Cu(py)SCN]<sup>+</sup>, was used for the sepn  
of Cu from Fe<sup>+++</sup> and Al<sup>+++</sup>, which were kept in soln by  
tartaric acid (cf. C.A. 45, 7012a). The Fe<sup>+++</sup> and Al<sup>+++</sup>  
ions were then pptd. from the filtrate with 8-hydroxyquinolin-  
8-ac. The method was rapid and precise. P. Keifescu

IRTEA, M.; DUMITRESCU, I.; ZELENCU, V.

New gravimetric methods for rapid determination of the elements  
nickel, cobalt, and cadmium, p. 238. Academia Republicii Populare Române.  
STUDII SI CERCETARI DE CHIMIE. Bucuresti. Vol. 3, no. 3-4, July/Dec. 1965.

No. 118 European Accessions List Vol. 5, No. 9 September, 1967

PIRTEA, D. ; AIBESC", I.

The macro-and microgravimetric method of determining the mercury in substances for the protection of plants. p. 137.

STUDII SI CERCETARI DE VENDE. Bucuresti, Romania  
Vol. 7, No. 1, 1959.

Monthly List of East European Accession (EEAI). LC, Vol. 5, No. 9, Sept. 1960  
Uncl.

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020002-8"

L 34899-66 EWP(t)/ETI IJF(c) LD  
ACC NRT AP6026618

SOURCE CODE: RU/0003/65/016/005/0288/0289

AUTHOR: Pirtea, T. I.

ORG: Laboratory for Analytical Chemistry, Faculty of Chemistry, Bucharest University  
(Laboratorul de chimie analitica, Facultata de chimie, Universitatea Bucuresti)

TITLE: New methods for the gravimetric determination of cadmium and lead

SOURCE: Revista de chimie, v. 16, no. 5, 1965, 288-289

TOPIC TAGS: cadmium, lead, chemical precipitation, quantitative analysis

ABSTRACT: The author describes a new gravimetric method for the determination of cadmium and lead through precipitation with aqueous solutions of  $\alpha, \alpha'$ -dipyridyl hydrochloride or  $\alpha, \alpha'$ -dipyridyl nitrate in the presence of ammonium thiocyanate. This method can be used in the presence of the elements Na, K, Ca, Sr, Ba, Mg, Be, Al, Cr, Sc, and  $\text{NH}_4^+$  ions. Orig. art. has: 2 figures and 2 tables. [Based on author's Eng. abstr.] [JPRS]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 008

Card 1/1

UDC: 546.48.04; 546.815.04; 545.12

PIRTEA, Th. I.

A new method for the gravimetric determination of manganese.  
Rev chimie Min petr 15 no.10:635-636 C '64.

I. Laboratory of Analytical Chemistry, Faculty of Chemistry  
Bucharest University.

b 64818-65 EWP(t)/EWP(b) IJP(o) JD

ACCESSION NR: AP5023231

RJ/0003/64/015/010/0635/0636

AUTHOR: Pirtea, Th. I.

13  
12  
B

TITLE: New method for the gravimetric determination of manganese

SOURCE: Revista de chimie, v. 15, no. 10, 1964, 635-636

TOPIC TAGS: manganese, gravimetric analysis

ABSTRACT:

The author describes a rapid and reliable method for the gravimetric determination of manganese by precipitating the Mn<sup>++</sup> ions with  $\alpha,\alpha'$ -dipyridyl hydrochloride in the presence of ammonium thiocyanate. The method may be used for the determination of manganese in the presence of magnesium, antimony, and the alkali and alkali earth elements if tartaric acid is used as a screening agent. Orig. art. has: 1 table, 1 figure.

Card 1/2

L 64818-65  
ACCESSION NR: AP5023231

ASSOCIATION: Laboratorul de chimie analitica, Facultatea de chimie, Universitatea  
Bucuresti (Laboratory of Analytical Chemistry, Faculty of Chemistry, University  
of Bucharest)

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, OC

MR REF Sov: 000

OTHER: 009

JPRS

MLR  
Card 2/2

PIRTEA, Th I.

Distr: 4E2c

A new microgravimetric method for the determination of aluminum. Th. I. Pirtea and Georgeata Mihail (Univ. C. I. Parhon, Bucharest, Romania). *Nucleo Univ. C. I. Parhon* Bucharest Ser. stiint. vol. 15, K3-6(1957).—This method uses the Na salt of mercaptobenzothiazole as the pptg. agent. The Al must be in a neutral soln. as the chloride, nitrate, or sulfate salt. Free acids and salts of acetic, tartaric, and oxalic acid must be absent since they will render the soln. acidic and will ppt. the reagent. To a 0.5 ml.-5 ml. soln. of the unknown 0.5-1 ml. of the reagent is added contg. 0.1-0.15 g. of Na mercaptobenzothiazole (I) per ml. of water. The pptn. is immediate and complete at room temp. After some shaking the soln. and ppt. are filtered and washed with a soln. contg. 0.5 g. of I per 100 ml. of water. The ppt. is then dried for 30 min. at 110-115°. It is weighed as the anhydride. This detn. can be performed in the presence of alkali metals and Mg. *Reclam*

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(21)

A new method for the microgravimetric determination of cobalt(II) Separation and determination in the presence of nickel. Th. I. Pitcairn and Polly Bucsan. *Analyst* 92, No. 16, 71-4.

(1967).—A new method is given for the microgravimetric detn. of Co as the complex  $[\text{Co}(\text{NH}_3)_6]\text{[Co}(\text{NO}_3)_6\text{]} \text{ (I)}$ . By treating a soln. of  $\text{Co}^{+2}$  with  $\text{NaNO}_3$ ,  $\text{AcOH}$ , and an excess of  $\text{NaNO}_3$ , the anionic complex  $[\text{Co}(\text{NO}_3)_6]^{4-}$  or  $\text{Na}^+[\text{Co}(\text{NO}_3)_6]$  is obtained. When this soln. is treated at room temp. with an aq. satd. soln. of  $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$ , I is pptd. as yellow insol. crystals. The ppt. is filtered after a few min., washed with alc. and abs. ether, dried for 10 min. in a vacuum dessicator, and weighed. The method is precise and rapid because of the insol. and high mol. wt. of I. Co can also be detd. in the presence of Ni with this method.

C. Heitner-Wirguin

Distr: 4E2c

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*PIRITA AJ*

*11.*

*2. (1957)*

Distr: 4E2c(j)/4E2c

A new method for the potentiometric determination of silver in the presence of other elements. P. Spacu and Th. T. Pirica (Univ. C. I. Parhon, Bucharest, Romania). *Z. Anal. "C. I. Parhon" Bucuresti, Ser. ptint. nat. No. 15, 67-71(1957).*—This new potentiometric method of titration uses as a reagent a 0.1*N* soln. of Na nitroprusside ( $\text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}] \cdot 2\text{H}_2\text{O}$ ). In order to cause the coagulation of the ppt. of Ag nitroprusside, 5-6 g. of  $\text{NaNO}_3$  is added previously to the soln. the total vol. of which should be around 100-150 ml. This allows for a better break in the potential curve at the end point. The potential of the system before the titration is around 408 m.v. and the inflection point at 310 m.v. with respect to the normal calomel electrode. A Ag wire was used as indicating electrode. The soln. has to be agitated during the whole titration. The presence of Zn and Pb does not disturb the titration since they do not form ppts. with the reagent. In the case of Cu and Cd they have to be masked with Complexon III or the Na salt of ethylenediaminetetraacetic acid. In such cases approx. 1 g. of the complexon is added. A. Berlin

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*Pirtea Th. I.*

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24752 E-2

Author : Pirtea, Th.I., Stroe, A.

Inst : U

Title : New Micro-Gravimetric Method for Determination of Zinc.

Orig pub : Rev. chim., 1957, 8, No 6, 435-437

Abstract : Description of a method based on precipitation reaction with the Na-salt of mercaptobenzothiazole at room temperature. The precipitate is filtered off immediately, dried at 110° and weighed. The conversion factor is 0.1044.

Card 1/1

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, № 8, 1958, 24742

Author : Spacu, P., Mirtea, Th.I.  
Inst : -

Title : New Method of Potentiometric Determination of Silver in  
the Presence of Other Elements.

Orig Pub : An. Univ. "C.J. Iarhon". Ser. stiint. natur., 1957, № 15,  
67-71

Abstract : Ag<sup>+</sup> is determined by potentiometric titration with 0.1 N  
solution of Na nitroprusside in a weakly acidic solution  
and in the presence of 5-6 g NaNO<sub>2</sub> which serves to coagulate  
the resulting colloidal Ag<sub>2</sub>Fe(CN)<sub>5</sub>(NO). An Ag wire is  
used as the indicator electrode and a calomel electrode as  
the reference electrode. The presence in the solution  
being titrated of Pb<sup>2+</sup> (up to 50 ml of 0.1 N solution) and  
of Zn<sup>2+</sup> (up to 30 ml of 0.1 N solution) does not interfere  
with determination of Ag. In the presence of Cu<sup>2+</sup>

Card 1/2

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, № 8, 1958, 24742

(30 ml 0.1 N solution) and Cd<sup>2+</sup> (5 ml 0.1 N solution)  
0.8-1 g Complexon III are added to the solution being  
titrated in order to mask these ions. NO<sub>2</sub><sup>-</sup>, Cl<sup>-</sup>, COO<sup>-</sup>,  
SO<sub>4</sub><sup>2-</sup> do not interfere. Determination error does not  
exceed 2%.

Card 2/2

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, Nc 8, 1958, 24761

Author : Pirtea, Th.I., Mihail Georgescu

Inst : ~~—~~

Title : New Micromethod of Gravimetric Determination of Aluminum

Orig Pub : An. Univ. "C.J. Parhon". Ser. stiint. natur., 1957, N. 15,  
83-86

Abstract : On interaction of  $\text{Al}^{3+}$  with the Na-salt of mercapto-benzothiazole (I) in neutral or weakly acidic media (pH 6) there is formed a white crystalline precipitate of  $\text{Al}(\text{C}_6\text{H}_5\text{NS}_2)_2$ , which is practically insoluble in water and in excess of the reagent, and which is suitable for a gravimetric determination of Al. To 0.5-5 ml of the solution being analyzed, containing about 0.5 mg/ml of Al, are added 0.5-1 ml of 10-15% solution of I. The mixture is stirred, filtered and washed 2-3 times with 0.5% solution of I, and 2-3 times with water. The precipitate so obtained

Card 1/2

RUMUNIA/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24761

is dried at 110-115° and weighed. The conversion factor is 0.051307. Ions of alkali metals and Mg do not interfere with the determination. In the presence of free mineral acids, acetates, oxalates and tartrates, the I<sub>2</sub> itself is precipitated, hence they must be removed beforehand. The described method is not inferior in accuracy to the o-hydroxy-quinoline method.

Card 2/2

27

P RATEA, Th I.

Distr: 4E2c

27

Microgravimetric determination of thorium. Th. I. Petres and Georgeiu Mihail (Univ. C. I. Parhon, Bucharest, Romania). Analele Univ. "C. I. Parhon" Bucuresti Ser. chim. vol. No. 12, 51-6 (1950). Th is pptd. as  $\text{Th}(\text{C}_2\text{H}_4\text{NS}_2)_2$  with a soln. of the Na salt of mercaptobenzothiazole. The pptn. is immediate at room temp., and the ppt. is white and cryst. It is filtered immediately and dried 30-60 min. at 110-115°. This method can be used to det. Th in the presence of the salts formed by the alkali and by Mg with strong acids. Free acids must be absent from the Th soln. as they will ppt. the pptg. agent. A. Berlin

4

AS

Distr: bE2c

A new microgravimetric method for the determination of aluminum. Th. I. Pătrăș and G. Popescu. Anal. Chim. Acta, 1971, 61, 15-18.

Pătrăș, Bucharest, Romania. A new microgravimetric method uses the Na salt of metraptiazine (azotin) as the pptg agent. The Al must be in a neutral salt as chloride, nitrate or sulfate salt. Free acid and salts of citric, tartaric and oxalic acid must be absent since they will render the soln acidic and will protonate the pptg agent. 5 ml 5 ml soln of the unknown Al<sup>3+</sup> is taken and 1 ml 5 ml 0.1 M g of the sodium salt of metraptiazine is added using 0.1-0.15 g of the sodium salt of metraptiazine per ml of water. The pptg is made at room temp and left at room temp. After some shaking time, the ppt is collected and washed with a solution containing 10% NaCl and 10% H<sub>2</sub>O<sub>2</sub> of water. The ppt is then dried for about 10 min at 100°C. It is weighed as the anhydride. This determination is performed in the presence of alkali nitroso and NH<sub>4</sub><sup>+</sup>.

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PIRTA, TH.; SPACI, P.

A method of determining penicillin in finished products. p. 49.

ANALELE SREVIA STINTELOR NATURII. Bucuresti, Rumania. Vol. 7, no. 20, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 9, Sept., 1959

Uncl.

RUMANIA / Analytic Chemistry, Analysis of Inorganic Substances.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60622.

Author : Th. I. Pirtea, Polly Bucsan.  
Inst : "C. J. Parhon" University.

Title : New Method of Microgravimetric Determination of Cobalt. Separation and Determination of Cobalt in Presence of Nickel.

Orig Pub: An. Univ. "C. J. Parhon". Ser. stiint. natur., 1957, No 16, 71-74.

Abstract: The earlier developed method of determination of Co in the form of the complex  $[Co(NH_3)_6] [Co(NO_2)_6]$  (RZhKhim, 1958, 24807) was applied to the de-

Card 1/2

P. R. Tousek, Fredrik

Development and Prospects of U.S.A. and  
Great Britain in the Sphere of Space

The article is an abridgement of a report presented to the American Chemical Society, Division of Industrial and Engineering Chemistry, at the meeting held in Atlantic City, N. J., April 1-4, 1936.

at the same time, it is important to have a clear understanding of the market in which the product will be sold. This requires a brief review of the general market conditions, especially the political and economic situation in the country where the product will be sold. It is also important to understand the production costs of the product in the target market, as well as the cost of labor and materials.

of chrome, sanded in the U.S.A., and the remainder in the U.K. The author has had no experience in the U.S.S.R. Here production is limited to three sanding districts, i.e. Moscow, St. Petersburg and Leningrad. In Moscow, where mainly low-grade ore with poor magnetic properties is used, the sanding content is high and processed in large-scale installations. Two main plants, to take raw material from the mine directly, are in operation, one at Kursk and another at Vologda. Both have been under construction since 1937 and will have been completed by 1940.

the main Haila, Gales, Parsons, Lake Clark, Aniakchak and King Salmon with a total production of 1,000,000 lbs. The Nushaktuk form of salmon is produced at the Nushaktuk cannery (Angecon River), located in the Nushaktuk River drainage basin. This river has a drainage area of 7,000 sq. miles and a mean annual run of 7,000,000 lbs. The salmon are harvested under the administration of the Nushaktuk Native Association. Under the Nushaktuk Native Association, there is a cannery at Logana, Alaska, which produces 1,000,000 lbs. of salmon annually.

(Parr Lines), Inc., of the Morris, Iowa, plant, Grindstone and Rosalia, with a production capacity of 15,254 tons in 1957, and the 15,254-ton Parr Lines plant at Rosalia which were closed in 1958.

The output from the remaining lines in Iowa is 15% of the total product, or 1,000,000 metric tons per year. The remaining 85% of the product is produced in C. O. G. facilities with a capacity of 1,000,000 metric tons per year, about 80% of which is produced by the 15,254-ton Parr Lines plant at Rosalia.

ore were exported in large quantities from India, including iron, rock, and coal. These were processed in the numerous blast furnaces at Broxburn and Johnston, and the pig-iron produced was exported in large quantities. The chromite ore was sent to the blast furnaces at the Consett Works for smelting, and the refractory masses were used as a flux.

cause the authors have not been able to find any record of all numbers of the species necessary to relate them to the species of the genus. It is necessary to increase the present number of species by adding the new species described by the authors of present day. The following table gives the number of species in the genus and the number of species which have been described by the authors of present day.

1. *W. E. B. DuBois*, *The Souls of Black Folk* (1903), p. 10.

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ACCESSION NR: AP4046174 S/0079/64/034/009/2910/2911

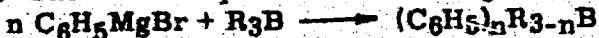
AUTHOR: Kacheishvili, G. Ye.; Pirtskhalava, N. I.; Dzhioshvili, G. D.

TITLE: Reaction of borontrialkyls with phenylmagnesium bromide

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2910-2911

TOPIC TAGS: borontrialkyl, phenylmagnesium bromide, alkyl aryl organic boron compound, triphenylboron

ABSTRACT: The reaction proceeds according to the scheme



and was conducted in ether solution under nitrogen, yielding a mixture of alkyl-aryl organic boron compounds or triphenylboron. The desired products were obtained with a 40-75% yield and are described. These were phenyldiisopropyl-, diphenylisopropyl-, phenyldi-n-propyl-, phenyldiisobutyl-, diphenylisobutyl-, phenyl-di-n-butyl-, diphenyl-n-butyl, phenylisoamyl-, phenyldi-n-amyl- and triphenylboron. Orig. art. has: 2 tables and 1 formula

Cord 1/2

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Card 2/2

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PIRTSKHALAVA, M.D.

Concerning synthetic machine translating networks for conjunctions  
and particles in the Georgian language. Trudy Inst.ek.<sup>?</sup> (MIRA 14:8)  
avtom.i telem.AN Gruz. ~~2~~ 2:113-115 '61.  
(Georgian language—Machine translating)

L 65177-65 EWT(1)/EPA(s)-2/EWT(m)/EPP(c)/EWP(j)/T/EWA(h)/EWA(c) IJP(c)/  
RPL JW/AT/RM

ACCESSION NR: AP5022150

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621.315.592:547

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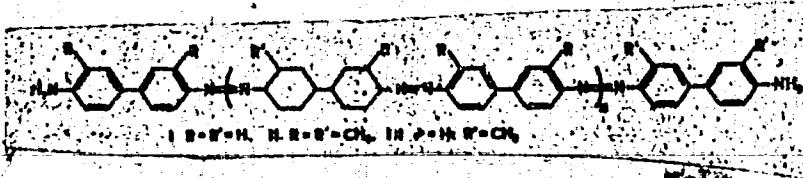
AUTHOR: Demidova, G. N.; Pirtskhalava, R. N.; Rozenshteyn, L. D.; Terpugova, M. P.;  
Kotlyarevskiy, I. L.

TITLE: Absorption spectra, electrical conductivity, and photoconductivity of poly-  
azopolyarenes

SOURCE: Elektrokhimiya, v. 1, no. 9, 1965, 1145-1149

TOPIC TAGS: organic semiconductor, organic photoconductor, photoconductivity, elec-  
tric conductivity, conjugated polymer

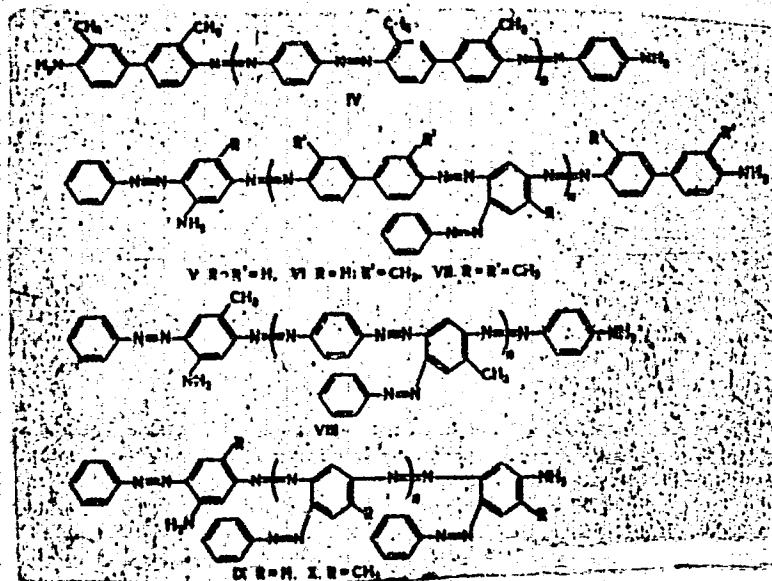
ABSTRACT: Electrical conductivity, photoconductivity and absorption spectra have  
been measured for a number of polyazopolyarenes:



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The materials were prepared by oxidative polycondensation or copolycondensation of aromatic diamines in the presence of cuprous chloride catalyst. The study of these compounds was prompted by the varying character of conjugation among them. The properties of the compounds are shown in Table 1 of the Enclosure. Electrical measurements were carried out with molded specimens. The temperature dependence of electrical conductivity obeyed an exponential law. For some of the compounds the log  $\sigma$  versus  $1/T$  curves showed a break and hence two values of E and  $\sigma_0$  are given for them in Table 1. Photoconduction was studied with film specimens. In the field range used (up to  $5 \times 10^4$  v/cm) the photocurrent obeyed Ohm's law. For most films the lux-ampere characteristic was linear. The photocurrent was an exponential function of temperature. The spectral regions of photoconductivity corresponded to spectral regions of optical absorption. Comparison of absolute values of photocurrent for the polymers revealed a sharp drop in photocurrent on going to compounds with decreasing conjugated chain length. Orig. art. has: 6 figures, 1 table, and 5 formulas.

[SM]

ASSOCIATION: Institut poluprovodnikov Akademii nauk SSSR (Institute of Semiconductors, Academy of Sciences SSSR); Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Chemical Kinetics and Combustion, Siberian Department, Academy of Sciences SSSR)

Card 3/6

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ACCESSION NR: AP5022150

SUBMITTED: 09Feb65

ENCL: 02

SUB CODE: MT, GC

NO REF Sov: 006

OTHER: 000

ATD PRESS: 4089

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ACCESSION NR: AP5022150

ENCLOSURE: 01

Table 1. Properties of polyazopolyarenes

| Diamines                                | Polymer | mp                              | Solubility  | Electrical conductivity data |                               |               |                               |
|---|---------|---------------------------------|---|------------------------------|-------------------------------|---------------|-------------------------------|
|   |         |                                 |   | $E_1$ ,<br>ev                | $\sigma_{01}$ ,<br>cm $^{-1}$ | $E_2$ ,<br>ev | $\sigma_{02}$ ,<br>cm $^{-1}$ |
| Benzidine                               | I       | Diss.<br>soft<br>until<br>500°C | Partial in<br>dimethylform-<br>amide<br>$<230^\circ$          | 0.65                         | $1.13 \cdot 10^{-3}$          | 0.78          | $2.9$                         |
| o-Toluidine                             | II      | "                               | Partial in<br>acetone, ben-<br>zene, chloro-<br>form, dioxane |                              |                               | 1.4           | $3.65 \cdot 10^2$             |
| o-Toluidine,<br>benzidine               | III     | 208°C                           | Partial in<br>chloroform,<br>dioxane<br>$<130^\circ$          | 0.59                         | $7.2 \cdot 10^{-7}$           | 1.6           | $1.82 \cdot 10^{11}$          |
| o-Toluidine,<br>p-phenylene-<br>diamine | IV      | 249°C                           | Partial in<br>acetone,<br>chloroform,<br>benzene              |                              |                               | 2.1           | $1.15 \cdot 10^{13}$          |
| Benzidine,<br>chrysoidene               | V       | 352°C                           | Partial in<br>chloroform,<br>acetone                          |                              |                               | 2.35          | $1.15 \cdot 10^{13}$          |

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L 65177-65

ACCESSION NR: AP5022150

ENCLOSURE: 02

Table I. Properties of polyalkyleneparaffins (Cont.)

| Diamines                                  | Polymer | mp          | Solubility   | Electrical conductivity data |                                      |               |                                      |
|---|---------|-------------|--|------------------------------|--------------------------------------|---------------|--------------------------------------|
|   |         |             |  | $E_1$ ,<br>ev                | $\sigma_{(1)}$ ,<br>$\text{cm}^{-1}$ | $E_2$ ,<br>ev | $\sigma_{(2)}$ ,<br>$\text{cm}^{-1}$ |
| <i>o</i> -Toluidine,<br>chrysoidene       | VI      | 206C        | Partial in<br>chloroform,<br>acetone   | 0.84<br>0.136                | $1.1 \cdot 10^{21}$                  | 2.1           | $1.8 \cdot 10^{11}$                  |
| <i>o</i> -Toluidine,<br>methylchrysoidene | VII     | 212—<br>217 | Partial in<br>benzene, ace-<br>tone, chloro-<br>form, dimethyl-<br>formamide |                              |                                      | 2.93          | $3 \cdot 10^{21}$                    |
| <i>p</i> -Phenylenediamine                | VIII    | 209—<br>215 | Partial in<br>benzene, ace-<br>tone, chloro-<br>form, dimethyl-<br>formamide |                              |                                      | 3.1           | $2 \cdot 10^{22}$                    |
| Chrysoidene                               | IX      | 276—<br>278 | In benzene,<br>cumene, ace-<br>tone, chloro-<br>form                         |                              |                                      | 3.5           | $1.1 \cdot 10^{23}$                  |
| Methylchrysoidene                         | X       | 152         | In benzene,<br>cumene, ace-<br>tone, chloro-<br>form                         |                              |                                      | 3.14          | $6.2 \cdot 10^{23}$                  |

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L 62793-65 EMT(n)/EPT(c)/EPR/EMP(1)/T/EUA(d)  
ACCESSION NO: AP5018457

PC-4/P-4/P-4 W/JAJ/RM

UR/0364/65/001/007/0876/0880  
621.315.592:547

AUTHOR: Davydov, B. N.; Demidova, G. N.; Masirov, F. M.; Pirtakhalava, R. N.;  
Rozenshteyn, L. D.

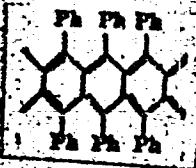
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TITLE: Synthesis of polydiphenyldiacetylenes and their electrical and physical properties B

SOURCE: Elektrokhimiya, v. 1, no. 7, 1965, 876-880

TOPIC TAGS: polymerization synthesis, acetylene, thermal stability, catalysis,  
photoelectric current

ABSTRACT: The article is concerned with the investigation of the properties of  
thermally polymerized diphenyldiacetylene, having the following structure



Cord 1/6

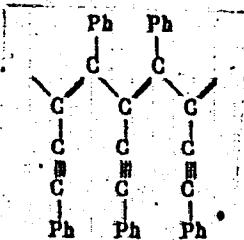
L 62793-65  
ACCESSION NR: AP5018457

The fact that all hydrogen atoms of the main chain are replaced by phenyl groups accounts for its solubility in chloroform, benzene, ether, dioxane, dimethylformamide and for its high thermal stability. It may be heated as high as 500°C without any significant decomposition. The polymer is a nonfusible dark brown substance. When it is deposited from solution on a substrate it forms a relatively strong film. The kinetic polymerization curves at different temperatures are shown in Fig. 1 of the Enclosure. The cryoscopic data indicates that the molecular weight of the polymer is 1100. Experiments with polymer films show that upon interaction with oxygen under the influence of light this polymer does not have a tendency to form inner peroxides. Diphenyldiacetylene was also polymerized catalytically using a complex catalyst, produced during interaction of triethylaluminum and vanadyl acetylacetone. The polymer obtained was also soluble in benzene, chloroform and other organic solvents. The thermal stability of this polymer was somewhat lower than in the polymers produced by thermal initiation. The lower stability is explained by the presence of the following structures in the chain:

Card 2/6

L 62793-65

ACCESSION NR: AP5018457



The photoelectric conductivity of thermal polymers is observed in the region where they absorb light. The spectral dependence of the photoelectric current reduced to the same amount of energy incident on the specimen is in good agreement with the absorption spectrum (Fig. 2 of the Enclosure). Catalytic polymers displayed no photoelectric conductivity. An attempt was made to measure the dark current, but it was possible to record it only when the field strength exceeded  $2 \cdot 10^4$  V/cm. Orig. art. has: 5 figures.

ASSOCIATION: Intitut neftekhimicheskogo sinteza Akademii nauk SSSR (Petrochemical Synthesis Institute Academy of Sciences SSSR)

Card 3/6

L 62793-65  
ACCESSION NR: AP5018457

Institut poluprovodnikov Akademii nauk SSSR (Institute of Semiconductors Academy of Sciences SSSR)

SUBMITTED: 09Feb65

ENCL: 02

SUB CODE: OC, EM

NO REF Sov: 005

OTHER: 000

Card 4/6

L 62792-65

ACCESSION NR: APS018457

ENCLOSURE: 01

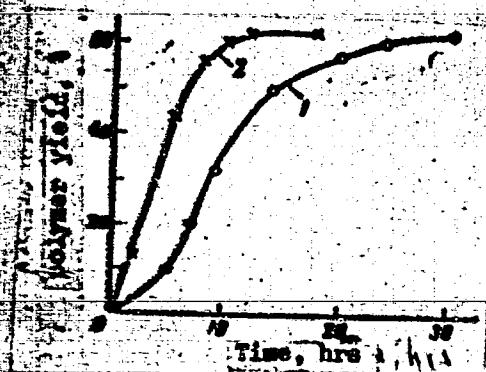
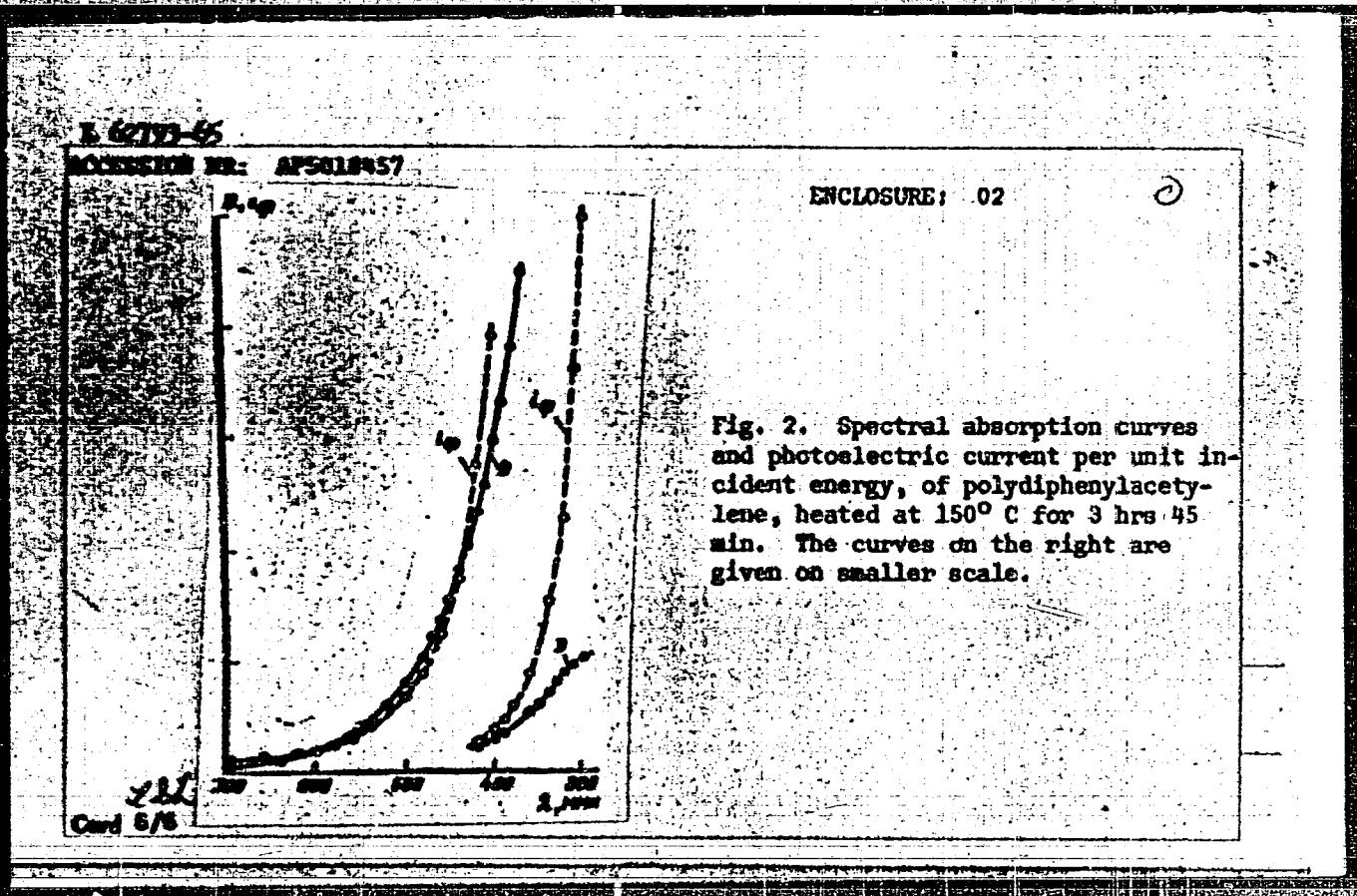


Fig. 1. Kinetic curves for thermal polymerization of diphenyldiacetylene at 106° C (1) and 133° C (2)

Contd 5/8



KUTATELADZE, K.S.; PIRTSKHALAVA, Ye.A.

Investigating Borzhomi andesites in connection with the manufacture  
of dark glazes. Soob. AN Gruz.SSR 21 no.6:673-676 D '58.

(MIRA 12:4)

1. AN GruzSSR, Institut metallurgii. Predstavleno chlenom-korres-  
pondentom Akademii F.N. Tavadze.  
(Borzhomi--Andesites) (Glazes)

USSR/Cultivated Plants. Subtropical. Tropical.

M-8

Abs Jour: Ref. Zhur-Biologiya, No 5, 1958, 20532.

Author : S. Kh. Pirtskhalayshvili  
Inst : The All-Union Scientific Research Institute for Tea and  
Subtropical Crops.  
Title : Contribution to the Problem of Better Stocks for Citrus  
Crops. (K voprosu o luchshikh podboyakh dlya tsitrusovykh  
kul'tur).

Orig Pub: Byul. Vses. n.-i. in-ta chaya i subtrop. kul'tur, 1956,  
No 4, 72-80.

Abstract: Preliminary data is given on the tests conducted from 1950  
to 1956 to study stocks for citrus fruit cultures under  
field conditions. As stocks one tried the trifoliata,  
bitter orange, Kaba lemon, seedlings of the Novogruzinskiy  
lemon, seedlings of the Meatniy orange, Natsu-Mikan, Tsitrus

Card : 1/4

USSR/Cultivated Plants. Subtropical. Tropical.

Abs Jour: Ref Zhur-Biologiya, No 5, 1958, 20532.

M-8

Yunos, The Grapefruit Duncan, Tsitranch, Kinkan; as grafts, the Novogruzinskiy lemon, seedlings of the Novogruzinskiy lemon, seedlings of the Monakello lemon, the Washington Navel orange, seedlings of the Mestniy orange, the Unshiu mandarin. Eyes of the Novogruzinskiy lemon adapted themselves almost uniformly well to all stocks (95-97%); eyes of the Monakello lemon showed maximum adaptability when inoculated into the Kaba lemon (96%) and minimal in the bitter orange and trifoliata (53-55%); eyes of the Washington Navel orange had maximum adaptability on seedlings of the Novogruzinskiy lemon (91%). Eyes of the Unshiu mandarin showed maximum compatibility when they were inoculated in seedlings of the Novogruzinskiy lemon and Kaba lemon (77-78%), then on the trifoliata (65%) and least on the bitter orange (45%). The most vigorous growth in all

Card : 2/4

USSR/Cultivated plants. Subtropical. Tropical.  
APPROVED FOR RELEASE: 07/13/2001  
Abs Jour: Ref Zhur-Biologiya, No 5, 1958, 20532.

M-8

stocks observed was witnessed in the Novogruzinskiy lemon, then come the Washington Navel orange and Monakello lemon. The Unshiu mandarin orange displayed vigorous growth on all stocks. Among the powerfully growing stocks are cited the seedlings of the Novogruzinskiy lemon, then the Kaba lemon, the bitter orange, the grapefruit, orange seedlings; the weakest growth is in the trifoliata. Of all the stocks tested the trifoliata was the most suitable stock for open ground citrus cultures, inasmuch as it promoted increased frost resistance and earlier fruit bearing of the citrus crops and guaranteed a steady growth in the grafts. Low growing trees are easier to protect in cold weather and it is more convenient to take care of them. On this stock all citrus varieties show satisfactory eye adaptability.

Card : 3/4

S/137/60/000/011/034/043  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, p. 251,  
# 27245

AUTHORS: Tavadze, P.N., Pirtskhalayshvili, V.A.  
TITLE: Investigating the Structure of Cast-Iron of the Chrome-Manganese System  
PERIODICAL: Dokl. Nauchno-proizv. konferentsii mashinostroiteley i priborostroiteley, Leningrad, Sudpromgiz, 1959, pp. 184 - 194

TEXT: It was revealed that in alloys of the Fe-Cr-Mn system at a C content of 0.12%, C widens considerably the range of alloys with an austenite base, shifting it toward the side of higher Cr concentrations. At C 2.2 - 2.4% this range includes alloys containing > 25% Cr. The austenite of Cr-Mn-cast irons with Mn 15 - 20%, Cr from 0 to 6 - 8%, decomposes partially into perlite starting from 675 - 700°C; austenite, however, does not undergo perlite decomposition. In low-chromium alloys, in the range of austenite-base Cr-Mn-system of cast-irons, a part of Mn is bound in  $(Fe,Mn,Cr)_3C$  carbides. In high chromium alloys, Cr is

Card 1/2

S/137/60/000/011/034/043  
A006/A001

Investigating the Structure of Cast-Iron of the Chrome-Manganese System

mainly bound in carbides and its ferrite-forming capacity vanishes. Si affects the stability of the austenite of the Cr-Mn system. In the Cr-Mn system of cast irons C is bound in carbides rich in Cr and Mn. Free C is present in the structure only in alloys with a low Cr and Mn content. There are 18 references.

A.S.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

ZEDGINIDZE, Ye.N.; PIRTSKHALAVA, Ye.A.; MAMULASHVILI, N.K.; BAGATUROVA,  
I.A.

Studying laterite clays of the Tsatskhlauri deposit. Soob.AN Gruz.  
SSR 25 no.5:539-542 N '60. (MIRA 14:1)

1. Akademiya nauk GruzSSR, Institut prikladnoy khimii i elektro-  
khimii, Tbilisi. Predstavлено академиком R.I.Agladze.  
(Kobuleti District--Laterite)

CHARGEYSHVILI, A.K., prof.; PIRTSKHALAYSHVILI, V.A.

Report on the activity of the Georgian Scientific Medical Society of Otorhinolaryngologists for 1962. Vest. oto-rin.  
25 no.4:104-106 Jl-Ag '63. (MIRA 17:1)

1. Prezidiat' Gruzinskogo nauchnogo meditsinskogo obshchestva  
otorinolaringologov (for Chargeyshvili). 2. Sekretar'  
Gruzinskogo nauchnogo meditsinskogo obshchestva otorinolaringologov (for Pirtskhalayshvili).

TAVADZE, F.N.; PIRTSKHALAYSHVILI, V.A.

Effect of high carbon content in the austenite field of the system  
iron-chromium-manganese. Soob. AN Gruz.SSR 21 no.6:727-733 D '58.

1. AN GruzSSR, Institut metallurgii, Tbilisi. 2. Chlen-korrespondent AN GruzSSR (for Tavadze).

(Iron alloys)

CHARGEYSHVILI, A.K., prof. PIRTSKHALAYSHVILI, V.A.

Report on the work of the Georgian Society of Otorhinolaryngologists  
in 1956. Vest.oto-rin. 19 no.4:120-122 Jl-Ag '57. (MIRA 10:11)

1. Predsedatel' Gruzinskogo respublikanskogo nauchnogo obshchestva  
oto-rino-laringologov (for Chargeyshvili). 2. Sekretar' Gruzinskogo  
respublikanskogo nauchnogo obshchestva oto-rino-laringologov (for  
Pirtskhalayshvili)  
(OTORHINOLARYNGOLOGISTS)

PIRUMOV, Kh.N.

Data on the development of control of parasitic diseases in the  
Armenia S.S.R. Med.paraz. i paraz.bol. 26 no.5:578-581 8-0 '57.  
(MIRA 11:2)

1. Iz Instituta epidemiologii i gigiyeny Ministerstva zdravovo-  
okhreneniya Armyskoy SSR.

(PARASITIC DISEASES, prev. & control  
in Armenia (Rus))

Pirtea, Resping

A new gravimetric method for the rapid determination of copper. Dezsöla Pirtea, Beaterina Buzatu, and Suzana Zelig. *Acta. rep. Jozefine Române. Studii cercetari chim.* 3, 233-6(1955)(French summary). The method is based on the pptn. of  $\text{Cu}^{+2}$  as [Cupryl] $(\text{ClO}_4)_2$  with  $\text{NaClO}_4$  (I) in the presence of pyridine (II). Add II dropwise to 20-30 ml. of the soln. until the blue color does not change and a slight odor of II is perceptible; add an excess of I (2-3 g); stir, and let the ppt. stand until the supernatant is clear and

colorless. (If the soln. is still bluish, add more I and agitate again). Filter the soln. through a filter crucible A; wash several times with an eq. soln. std. with I contg. 2 drops of II/50 ml.; next wash 5-8 times with 2-ml. portions of a soln. contg. abs.  $\text{EtOH}$  (3 ml.), abs.  $\text{Et}_2\text{O}$  (7 ml.), II (3 drops), and I (0.01 g.), and finally wash 4-5 times with 2-3-ml. portions of abs.  $\text{Et}_2\text{O}$ . Dry for 15 min. in a vacuum desiccator (to const. wt.) and filter. The accuracy of the method is within  $\pm 0.4\%$ .

Gary Gerard

Pirtea, Despina

7 New gravimetric methods for the rapid determination of  
nickel, cobalt, and cadmium? Despina Pirtea, Gh. Dumitrescu,  
and N. Melenca. Acad. Populare Romane,  
Studii cercetari chim., 3, 27-42 (1955) [French summary].  
The methods are based on the pptn. and direct weighing of  
the insol. complexes  $[X\text{py}]_3[\text{CrO}_4]$ , where X = Ni, Co,  
and Cd. To 50-50 ml. soln. contg. Ni, add pyridine (I)  
dropwise until the blue color is not intensified by further  
addn. Add an excess of an aq. soln. satd. with  $\text{K}_3\text{Cr}_2\text{O}_7$   
(II), heat cautiously to boiling while agitating continuously,  
and then boil for a few more min. until the ppt. has become  
cryst. (evidenced by rapid settling). Add 2 more drops of  
I and 1 ml. of II; cool to room temp.; filter through a filter  
crucible; wash several times with a soln. contg. II (3  
ml.), I (0.5 ml.), and  $\text{H}_2\text{O}$  (100 ml.); and then wash 5-6  
times with 2-ml. portions of abs.  $\text{EtOH}$  contg. 10 drops of  
I in 10 ml. Apply a relatively high vacuum, and wash 3-4  
times with 2-ml. portions of abs.  $\text{Et}_2\text{O}$ . Dry in a vacuum  
desiccator at room temp. and weigh. Co and Cd are detd.  
similarly. All 3 methods are accurate to within  $\pm 0.2\%$ .

Caro Cernat

PIRTEA, DESPINA

USSR

✓ 304. Separation and spectrophotometric determination of copper in the presence of iron or aluminum or  
other cations. G. S. Spacu and D. Popescu. Pat. No.  
(Comm. Acad. R.P. România, 1953, 1954).  
Referativnyi Z. Khim., 1954, Abstr. No. 31,000.—  
Copper is pptd. as CuPy<sub>4</sub>(CNS)<sub>4</sub> (Spacu and Dick,  
Z. anal. Chem., 1957, 71, 188) from a soln. con-  
taining tartrate, which prevents the pptn. of Fe and  
Al. Fe and Al are pptd. from the filtrate by an  
ethanolic soln. of 8-hydroxyquinoline. R. HAYES

LETIA, S.; STATI, E.; DEME, T.

New gravimetric method for rapid determination of copper. p. 233.

Academie Republicii Populare Romane. STUDII SI TRACTARI DE CIVILIE  
Bucuresti. Vol. 3, no. 3/4, July/Dec. 1955

So. East European Accessions List Vol. 5, No. 9 September, 1956

PIRTIU, I.; STUF, A.

A new microgravimetric method for the determination of zinc.

P. 435 (REVISTA DE CHIMIE) (Bucuresti, Rumania) Vol. 8, No. 6, June 1957

SC: Monthly Index of East European Accessions (PEAI) LC Vol. 7, No. 5, 1958

TIPTA, T.

Theorghe Spacu; an obituary. p. 155. Academia Republicii Populare  
Romane. ST DII SI C ETAPI DE VIMIE. Bucuresti. Vol. 3, no. 3/4, July/  
Dec. 1955.

So. East European Acessions List Vol. 5, No. 2 September, 1956

PIRTEA, T.

A new method for the separation and gravimetric dosage of zinc. p. 1<sup>83</sup>.  
Vol. 2, No. 3/4, July/Dec. 1954, Bucuresti, Rumania.

SOURCE: East European Accessions List, Library of Congress, Vol. 5, No. 10,  
October 1956.

PIETTA, T.

"A New Method for the spectrometric determination of teryllium(II). F.I.C.  
BULVATIN STIINTIFIC, Vol. 3, No.2-L, Apr./Dec. Bucuresti, Romania.

SC: Monthly List of East European Accessions, L.C.Vol. 2, No. 11, Nov, 1962.  
Uncl.

FIRTEA, T.

rapid precise process for separation and gravimetric quantitative analysis of zinc in the presence of iron and aluminum. p. 459.  
AC DEMIA REV. LI R PCT. LIV. ROMANE. RUmania. Vol. 5,  
no. 5, May 1955.

SOURCE: EHAL LC Vol. 5, No. 11, August 1956

PLA/IA/Analysis of Inorganic Substances

G-2

Abstr.: J. Am. Chem. Soc., 79, 1957, 10140.

Author : J. Spach, M. Hirsh

Inst : U. C. Berkeley

Title : New method of quantitative determination of Mercury in the presence of Iron and Aluminum.

Mag. Pub: Anal. Chem., 29, 1957, 10140, 10141.

Abstract:  $\text{Hg}^{2+}$  ions are precipitated as  $(\text{HgI}_4)_2(\text{C}_6\text{H}_5\text{COO})_2$  after  $\text{Fe}^{3+}$  and  $\text{Al}^{3+}$  have been combined in a 1,10-phenanthroline-salicylate complex.  $\text{Fe}$  and  $\text{Al}$  are determined in the filtrate, using a known method.

Card 1/1

- 19 -

PIR TEA, Th. I.

New gravimetric methods for the determination of thorium, aluminum, beryllium and zinc and their separation from certain elements. G. Sparta and Th. J. Distr. (Univ. "I. Parhuz," Bucharest). Rev. chim., Acad. Rep. Poporile Române 1, No. 2, 6-25 (1950) (in French).

In a modification of method with mercaptobenzothiazole (I) for the detn. of Cu, Cd, Pb, Ti, Bi, and Au (C.A. 29, 7213; 30, 2875), a procedure is described by which Th, Al, Zn, and Be are estd. gravimetrically by means of the Na salt (II) of I. Th. To 5-20 ml. of a Th(NO<sub>3</sub>)<sub>4</sub> soln. contg. 0.01-0.1 g. Th, add 2-10 ml. of a 10% aq. soln. of II with agitation. The pptd. I-Th (III), white crystals, is filtered, washed with 50-100 ml. of a soln. contg. 0.1-0.15 g. of II and distil. H<sub>2</sub>O, and dried at 110-120°. The factor is 5.2678. III can be calcined to ThO<sub>2</sub> at 1100°. Al. It is detd. by a similar method as a salt of I (factor 0.051307), or by the calcination of the latter to Al<sub>2</sub>O<sub>3</sub>. In the presence of Mg, Al is pptd. 1st with II, and after the pptn. of I with 10-15% HCl, Mg is detd. in the filtrate with an aq. soln. of 8-quinolinol (IV) (Berg, C.A. 21, 3850). Be. A neutral or weakly acidic Be salt soln. (5-50 ml.) contg. 0.003-0.08 g. Be is pptd. with 1-15 ml. of the soln. of II. The resulting I-BeOH<sub>2</sub>/H<sub>2</sub>O is washed with warm 3% NH<sub>4</sub>NO<sub>3</sub> soln. contg. II, dried over P<sub>2</sub>O<sub>5</sub>, and calcined to the oxide. SO<sub>4</sub><sup>2-</sup>, NO<sub>3</sub><sup>-</sup>, halogen<sup>-</sup>, OAc<sup>-</sup>, Na<sup>+</sup>, K<sup>+</sup>, NH<sub>4</sub><sup>+</sup> do not interfere with this detn. The sepn. of Be from Mg is carried out similarly to the estn. of Al and Mg. Be in the presence of Al. Al is pptd. with IV (Kolthoff and Bandell, C.A. 22, 3112), and Be from the filtrate with II at 00°. The Be-I is estd. as oxide, Zn. The Zn salt soln. (5-50 ml.) (pH 6-8), contg. 1-2 g. NaCl is pptd. with a 10% soln. of II (factor 0.1044). In the presence of Al and Fe, 1-2 g. of tartaric acid is added and Zn pptd. as Zn-I and calcined to ZnO. Zr. It is pptd. at pH 2.9 and estd. as ZrO<sub>2</sub>.

Distr: 483d

PIRTEA, T.I.

3

*✓ 1960 A new rapid gravimetric method for determining the  
determination of beryllium by T. I. Pirtea, Revue  
Chim., Bucharest, 1960, 11, 227-230. The  
amphoteric character of Be, which forms easily*

*soluble beryllates and salts that readily hydrolyse,  
hinders the formation of a single stable complex.  
This difficulty is overcome by combining Be with  
a suitable complex ion, and then with a second one.  
This is achieved by treating soln. of  $\text{Be}^{2+}$  with conc.  
soln. of ammonium carbonate. The sol. beryllium  
complex thus formed is treated with a conc. soln. of  
'hexa-amminocobalt chloride, which gives a very  
insoluble cryst. yellow ppt. of  $[(\text{NH}_3)_6\text{Be}_2(\text{CO}_3)_2(\text{OH})_4]$   
 $(\text{Co}(\text{NH}_3)_6)_2\text{H}_2\text{O}$ , which is easily washed and dried  
in a vacuum desiccator. The method is simple and  
quick (40 to 50 min.), and can be used in the presence  
of alkaline metals and Fe. Since the Be content  
of the ppt. is only 4.1%, accurate determination of  
small quantities is possible. H. Stark*

*P.M. — far  
Oay*

PIRTEA, T.I.

✓ 2894. New gravimetric and volumetric method  
for determination of silver<sup>+</sup>, copper and Tl<sup>+</sup>  
Pisica, Rev. Chim., Bucharest, 1956, 7 (9), 501-50

168. The procedure is based on the reaction of Ag<sup>+</sup> with sodium nitroprusside (I), which gives a cream ppt. of  $\text{Ag}_4[\text{Fe}(\text{CN})_6](\text{NO})_2$ , unaffected by light, stable, and insoluble, with mol. wt. greater than that of the usual halogen complexes. Pptn. is rapid and complete at room temp., and ppt. can be filtered immediately, and after washing can be dried in a vacuum desiccator or even in an oven at 110°. If modified the method can be used in the presence of Pb and Zn. *Gravimetric method*—To 10 to 30 ml of a neutral or acid soln. of Ag<sup>+</sup> at 50° to 60° add 1 to 2 g of solid  $\text{NH}_4\text{NO}_3$ , followed by approx. 0.1 N I. A yellow-red colour of the supernatant liquid indicates complete pptn. and excess of I. Filter immediately through a sintered glass crucible, washing with  $\text{NH}_4\text{NO}_3$  soln. (3%), water, ethanol and ether. Dry in a vacuum desiccator and weigh. The determination takes 1 to 1.5 hr. In the presence of Pb or Zn the ppt. is washed 4 to 5 times with aq.  $\text{NH}_4\text{NO}_3$  soln. (3%) heated to between 00° and 60°. *Volumetric method*—Since addition of I soln. to  $\text{AgNO}_3$  soln. leads to the formation of a colloidal ppt., the determination is carried out by running  $\text{AgNO}_3$  soln. into a known vol. of I. This gives a good end-point with or without eosin as an adsorption indicator. Results are consistently  $\approx 0.2\%$  high. H. Senn

PIRTEA, Th.I.

New methods for the gravimetric determination of copper. Rev  
chimie Min petr 13 no.4:234-235 Ap '62.

Pirtea, Th. L.

7/08

A new method for the separation and gravimetric determination of zinc. G. Stora and Th. L. Pirtea (U. I. Bucharest Univ., Bucharest). Acad. Rep. Populare Roum. Studii Cercetari Chim. 2, 173-180 (1951) (French summary).— Zn can be split as  $Zn(C_6H_5NS)_2$  (I) by adding an excess of a 10% soln. of the Na salt of mercaptobenzoate to the slightly acidic soln. (pH 5-6), filtering, washing, and drying at 115-120°. Adding a little NaCl improves the filtration. Na, K, Cu, Ba, Mg, and Sr do not interfere. Calcining I at 800-900° gives  $ZnO$ .  
Gary Gerard

PM  
7/08

RUMANIA / Analytical Chemistry. Inorganic Analysis.

Abs Jour : Ref Zhur - Khimiya, No 23, 1959, No. 81928  
Author : Spacu, P.; Pirtea, Th. I.  
Inst : Not given  
Title : Potentiometric Determination of Silver in the  
Presence of Other Elements  
Orig Pub : An. Univ. "C. I. Parhon". Ser. stiint. natur.,  
1958, No 20, 55-58

Abstract : It has been determined that the method previously developed by the authors for the determination of  $\text{Ag}^+$  by the potentiometric titration with sodium nitroprusside solution (RZ Khim, No 9, 1958, No. 24742) is also applicable when  $\text{Tl}^+$  and most elements that are found with  $\text{Ag}$  in alloys and ores (Pb, Cd, Zn, Cu, Co, Ni, Mn, Sb) are present in the solution. The solution

Card 1/2

✓ Gravimetric method for the determination of beryllium  
in the presence of other elements in alloys and minerals.  
Th. I. Pitca and V. Constantinescu (Cuij "C. I. Parthen,"  
Bucharest, Romania). "Z. anal. Chem." 165, 183-8 (1959).  
—In the presence of (ethylenedinitrilo)tetraacetic acid (I)  
Cu, Cd, Zn, Co, Ni, Fe, Al, Ti, Mn, Mg, Ca, Na, K, and  
 $\text{NH}_4^+$  do not interfere in the pptn. of  $[\text{Co}(\text{NH}_3)_6]^{[(\text{H}_2\text{O})_6]}$   
 $\text{Be}(\text{COO})_4(\text{OH})_2 \cdot 3\text{H}_2\text{O}$ . For the detn. of up to 75 mg. Be  
in 5-25 ml. of weakly acid soln. add 0.5-1 g.  $\text{NH}_4\text{Cl}$  and 0.5-2  
g. I (more if large amts. of  $\text{Fe}^{+++}$  are present). If a ppt.  
forms, add 10%  $\text{NH}_4\text{OH}$  dropwise until the ppt. dissolves.  
Add 2-3 g. powd.  $(\text{NH}_4)_2\text{CO}_3$ . Add without mixing 0.5-3  
ml. of  $\text{Co}(\text{NH}_3)_6\text{Cl}_6$  soln. (II) and wait for the ppt. to start  
forming. Add an excess of II. Dil. the soln. so that the  
salt concn. is 2-3%, let stand for 1.5-2 hrs., and filter into a  
stirred crucible. Wash with 0.2% I, 3-4 times with 3-ml.  
portions 60% EtOH contg. a few drops 0.2% I, and finally  
with EtOH and Et<sub>2</sub>O. Dry in a vacuum desiccator.

K. O. Stagg

Distr: 4E20

RUSIYA, Zaur; KHURTSILAVA, Gigla; SMAKHARADZE, Kukuri; MIKAYA, Zurab;  
SIRADZE, Bondo; AVAZASHVILI, Guguli; PIATSKHALASHVILI, Pavle;  
TATUASHVILI, Ansor

Search goes on. Sov. profsoiuzy 18 no.5:16-18 Mr '62.  
(MIRA 15:3)

1. Zavod "Elektroavtomat", g. Tbilisi.  
(Tiflis--Labor and laboring classes)

PIRTSKHALAISHVILLI, S.K., kand.s.-l'skokhoz.nauk

Research work on tea cultivation in principal tea growing provinces  
of China. Biul.VNIICHISK no.2:154-163 '57. (MIRA 15:5)  
(China--Tea research)

L 18727-66 EWT(m)/EWA(d)/EMP(t) IJP(c) JD/JG

ACC NR: AP6005092

SOURCE CODE: UR/ 0251/65/040/003/0685/0692

AUTHOR: Tavadze, P. N. (Academician AM GruzSSR); Pitskhelashvili, V. A.  
Kvartsishvili, M. L.

ORG: Georgian Institute of Metallurgy (Gruzinskiy institut metallurgii)

TITLE: Effect of chromium on the structure and properties of nitrogen-containing austenitic chromium-manganese and chromium-manganese-nickel steels 27  
18

SOURCE: AM GruzSSR. Soobshcheniya, v. 40, no. 3, 1965, 685-692

TOPIC TAGS: chromium, austenitic steel, nitrogen, plastic deformation, annealing, chromium steel, manganese steel 44B  
44u.5

ABSTRACT: Specimens of specially pelleted alloys containing different proportions of technically pure Fe, electrolytic Cr (13.89-21.60%) and Mn (11.72-12.20%) and nitrided electrolytic Cr<sup>2+</sup> and Mn<sup>2+</sup> (with ~6% N) were hot-worked (annealing at 1200°C for 5 hr + immediate water quenching or cooling at room temperature over 24 hr) were tested for microhardness, hardness, electric resistance and deformation resistance. Microstructural examination and phase identification were based on the use of various etching agents. Findings: Cr-Mn steels containing 16% Mn, 16-18% Cr and 0.40-0.50% N display the highest deformation resistance at 700°C under a stress of 15 kg/mm<sup>2</sup>. If the Cr content deviates from the 16-18% range, deformation resistance decreases

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sharply owing to the decrease in the Cr concentration of the  $\gamma$ -solid solution, appearance of porosity in ingots, and formation of a ferritic component in the structure. Cr-Mn steels containing up to 15.50% Cr display a higher deformation resistance when in quenched state compared with annealed state, whereas for the steels containing from 15.50 to 21.50% Cr this picture is reversed. Such an effect of hot working is apparently attributable to the difference in the rates of the aging process in the steels with a Cr content below and above 15.50%. The hardness and microhardness of the investigated Cr-Mn and Cr-Mn-Ni (~3% Ni) steels in quenched state are markedly higher than in annealed state. This may be due to the special character of the aging of these steels or to the low-temperature metastable transformation. The change in the deformation resistance of Cr-Mn-Ni steel at 700°C as a function of the concentration of Cr indicates that deformation resistance sharply increases in the presence of Cr concentrations of up to 17% but does not change appreciably above that limit. The presence of N in austenitic Cr-Mn and Cr-Mn-Ni steels in an amount not below its solubility limit in the  $\gamma$ -solid solution and not above its solubility limit in the melts of these steels markedly enhances their deformation resistance under conditions of prolonged exposure to high temperatures and loads. Orig. art. has: 2 tables, 4 figures.

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TSKHALAIA, M. T.

✓ Alumina from terra rossa. A. N. Dzhaparidze,  
M. S. Gogolashvili, and M. V. Pashadze. *Vesn. fiz.-khim. khim. nauch.-tekhnicheskikh issledovaniy po geologii i mineralogii*, 1954, No. 1, p. 70 (1955) [in Georgian; Russian summary]; *Refiz. zhur., Khim., 1954, No. 40028*.—The 2-stage extr. of  $Al_2O_3$  from red earth of Western Georgia was studied. The earth was treated with either  $H_2SO_4$  or HCl. The salts of Al and Fe obtained in the 1st stage were sep'd. by adding untreated red earth and removing from soln. the major part of Fe salts by means of hydrolysis followed by coagulation of Fe hydroxides. The weak acid formed in the hydrolysis process ext'd. Al salts with only a small admixt. of Fe salts. The HCl process yielded purer Al salts than did the  $H_2SO_4$  process. For final purification of Al salts they were crystd. from soln. as  $Al(NH_4)_2SO_4$  which were subsequently converted into pure  $Al_2O_3$  and  $(NH_4)_2SO_4$ . In the first stage of extr. of sesquioxides from red earth a highly dispersible amorphous  $SiO_2$  was obtained.

M. Joseph

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i. Tbilisskly posudarstvennyy universitet.

PIRTSKHALAISHVILI, N.F.

Using series of efficient designs at the Khatalskite granite  
strike mines, Izyev, helped to increase output by 10%.

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